09/681677 C of C

PATENT
30GF-1099

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: 7,164,684

Issued: January 16, 2007

Inventor(s): Matteson et al.

Assignee: GE FANUC Automation North America, Inc.

For: ETHERNET NODE HAVING HUB, SWITCH AND/OR REPEATER CHARACTERISTICS

CERTIFICATE OF MAILING

I certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on November 9, 2007.

Robert B. Reeser III
Reg. No. 45,548

Attention Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT UNDER 37 C.F.R. 1.322(a)

Sir:

Attached is Form PTO/SB/44 suitable for printing.

Submitted herewith is a copy of the Notice of Allowance and Fee(s) Due and the Notice of Allowability dated September 7, 2006 and a copy of the Amendment filed April 10, 2006. Applicants respectfully submit that the corrections shown below are in accordance with the Amendment filed April 10, 2006. The corrections thereof do not involve such changes in the patent as would constitute new matter or would require re-examination. Applicants respectfully request a Certificate of Correction for the following:

In Claim 4, column 7, line 42, before "method" insert -- A --.

The correction is not due to any error by Applicants and no fee is due.

The Assignment for this patent is recorded on Reel 011586/Frame 0269.

Respectfully submitted,

Date: Nov 9 2007

Robert B. Reeser, III
Reg. No. 45,548
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070

PTO/SB/44 (09-07)
Approved for use through 08/31/2010. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.	:	7,164,684
APPLICATION NO.	:	09/681,677
ISSUE DATE	:	January 16, 2007
INVENTOR(S)	:	Matteson et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In Claim 4, column 7, line 42, before "method" insert -- A --.

MAILING ADDRESS OF SENDER:
Robert B. Reeser, III
Armstrong Teasdale LLP
One Metropolitan Sq., Suite 2600
St. Louis, MO 63102

COPY

THE UNITED STATES PATENT OFFICE IS REQUESTED TO IMPRESS ITS STAMP ON THIS CARD AND PLACE SAME IN THE OUTGOING MAIL TO SHOW THE FOLLOWING PAPERS HAVE BEEN RECEIVED.

Atty. Dkt. No.: 30GF-1099 (14983/32)
Application of: Eric C. Matteson, et al.
Serial No. 09/681,677
Filed: May 18, 2001
Art Unit: 2664
Examiner: Jamal A. Fox
For: ETHERNET NODE HAVING HUB, SWITCH AND/OR REPEATER CHARACTERISTICS

Enclosed:

Amendment Transmittal Form (3 pgs.), in duplicate; includes Certificate of Express Mail
Amendment (15 pgs.), in response to Office Action dated 1/10/06

PWR/NP/ls
Mailed: April 10, 2006
Express Mail No.: EV770038660US

EV770038660US

SCANNED
By: 4/10/06

Entered into PAGE/PIPS
Date 5-12-06
By: E. Deaton

Express Mail Label No. E')0038660US

PATENT

Attorney Docket No.: 30GF-1099

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Eric C. Matteson, et al.

Art Unit: 2664

Serial No.: 09/681,677

Examiner: Jamal A. Fox

Filed: May 18, 2001

For: ETHERNET NODE HAVING HUB, SWITCH AND/OR REPEATER CHARACTERISTICS

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL

1. Transmitted herewith is:
   Amendment (15 pgs.), in response to Office Action dated January 10, 2006
   Transmittal Form (3 pgs.), in duplicate
   Return Post Card

STATUS

2. Applicant
   ☐ claims small entity status.
   ☐ is other than a small entity.

CERTIFICATE OF MAILING BY EXPRESS MAIL TO
THE COMMISSIONER FOR PATENTS

Express Mail No. EV770038660US
Date: April 10, 2006

I hereby certify that the documents listed above are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated above in an envelope addressed to Mail Stop: Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Patrick W. Rasche, Reg. No. 37,916

EXTENSION OF TERM

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.

(complete (a) or (b), as applicable)

(a) _____ Applicant petitions for an extension of time under 37 C.F.R. 1.136
(Fees: 37 C.F.R. 1.17(a)-(d) for the total number of months checked below:)

Extension for response within:	Other than small entity Fee	Small entity Fee (if applicable)
____ first month	$ 120.00	$ 60.00
____ second month	$ 450.00	$ 225.00
____ third month	$ 1,020.00	$ 510.00
____ fourth month	$1,590.00	$ 795.00
____ fifth month	$2,160.00	$1,080.00

Fee: $ _____

If an additional extension of time is required, please consider this a petition therefor.

(Check and complete the next item, if applicable)

____ An extension of _____ months has already been secured. The fee paid therefor $_____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request $_____

OR

(b) X Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

COPY

FEE FOR CLAIMS

4. The fee for claims (37 C.F.R. 1.16(b)-(d)) has been calculated as shown below:

	(Col. 1) CLAIMS REMAINING AFTER AMENDMENT		(Col. 2) HIGHEST NO. PREVIOUSLY PAID FOR	(Col. 3) PRESENT EXTRA	SMALL ENTITY ADDITIONAL. RATE FEE	OR	OTHER THAN SMALL ENTITY ADDITIONAL RATE FEE
TOTAL INDEP.		MINUS		=	x $25.00 = $		x $50.00 = $
		MINUS		=	x $100.00 = $		x $200.00 = $
__	FIRST PRESENTATION OF MULTIPLE DEP. CLAIM				+ $180.00 = $		+ $360.00 = $
					TOTAL ADDITIONAL FEE $	OR	TOTAL ADDITIONAL FEE $

(a) ☒ No additional fee for Claims is required

OR

(b) ☐ Total additional fee for claims required $ _____

FEE PAYMENT

5. Attached is a check in the sum of $_____

☐ Charge Deposit Account No. 01-2384 the sum of $_____.
A duplicate of this transmittal is attached.

FEE DEFICIENCY

6. ☒ If any additional extension and/or fee is required, charge Deposit Account No. 01-2384.

AND/OR

☒ If any additional fee for claims is required, charge Deposit Account No. 01-2384.

7. ☐ Other:

Patrick W. Rasche
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Express Mail No.: EV770038660US

30GF-1099
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Eric C. Matteson, et al.

Art Unit: 2664

Serial No.: 09/681,677

Examiner: Jamal A. Fox

Filed: May 18, 2001

For: ETHERNET NODE HAVING HUB, SWITCH AND/OR REPEATER CHARACTERISTICS

AMENDMENT

Mail Stop: Amendment
Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Office Action dated January 10, 2006, please amend the above-identified application as follows.

IN THE CLAIMS

1. (currently amended) A method for forming a network including a plurality of communication devices, a wire network for allowing a plurality of communication transmissions between the communications devices, and at least one connectivity device connected to the wire network, said method comprising the steps of:

utilizing the connectivity device to perform a repeater function including regenerating a communication signal such that the distance between the communications device is extended;

utilizing the connectivity device to perform a routing function including routing communication transmissions by the communications devices through the wire network; and

communicating, by a central processing unit located within the connectivity device, with a network hub device located within the connectivity device and a network switch device located within the connectivity device, wherein the network hub device performs a hub function including interconnecting the communication devices by bringing segments of the wire network together, and the network switch device performs a switching function including reducing communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network; and

integrating, within the connectivity device, a first function set and a second function set, wherein the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function.

2. (previously presented) A method in accordance with Claim 1 further comprising the steps of:

connecting one of the connectivity devices to a communications device; and

connecting the communications device to the wire network utilizing the connectivity device.

3. (currently amended) A method in accordance with Claim 1 further comprising the step of configuring the wire network to include at least one of the network hub device, the network switch device, a network repeater device and a network router device.

4. (original) A method in accordance with Claim 1 further comprising the step of utilizing the connectivity device in a wire network having a topology of at least one of a daisy-chain configuration, a ring configuration, and a star configuration.

5. (currently amended) A method in accordance with Claim 1 further comprising the step of utilizing the connectivity device to enable Single Point of Connect (SPOC) capability within the wire network.

6. (original) A method in accordance with Claim 1 further comprising the step of utilizing the connectivity device as at least one of a network fault tolerant device and a network fault tolerant management device.

7. (currently amended) A network system comprising:

a plurality of communications devices configured to communicate with each other;

a wire network configured to interconnect said communications devices and allow a plurality of communication transmissions between said communication devices;

a network connectivity device connected to said wire network, said network connectivity device configured to:

perform a repeater function including amplifying communication transmissions such that the distance between said communications device is extended; and

perform a routing function including routing communication transmissions through said wire network; and

a central processing unit located within said network connectivity device and configured to communicate with a network hub device located within said network connectivity device and a network switch device located within said network connectivity device, wherein said network hub device configured to perform a hub function including interconnecting said communication devices by bringing segments of said wire network together, said network switch device configured to perform a switching function including reducing communication collisions by providing communication transmissions from said communications devices with independent paths through said wire network, and said network connectivity device configured to integrate a first function set and a second function set, wherein the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function.

8. (currently amended) A system in accordance with Claim 7 wherein each said communication device is connected to said wire network using ~~one of~~ said network connectivity ~~devices~~device.

9. (previously presented) A system in accordance with Claim 7 wherein said network system further comprises at least one of the network hub device, the network switch device, a network repeater device, and a network router device.

10. (original) A system in accordance with Claim 7 wherein said wire network comprises a means suitable for carrying data and communication transmissions.

11. (currently amended) A system in accordance with Claim 7 wherein said network connectivity device configured to operate when said wire network uses a topology of at least one of a daisy-chain configuration, a ring configuration, and a star configuration.

12. (currently amended) A system in accordance with Claim 7 wherein said network connectivity device further configured to enable SPOC capability within said network system.

13. (currently amended) A system in accordance with Claim 7 wherein said network connectivity device further configured to function as at least one of a network fault tolerant device and a network fault management device.

14. (currently amended) A network connectivity device comprising a central processing unit connected to a electronic storage device, a hub module, a switch module, a repeater module and a router module, said connectivity device connected to a wire network interconnecting a plurality of communication devices, said connectivity device configured to:

utilize said router module to perform a routing function including routing communication transmissions through the wire network, wherein said connectivity device includes a central processing unit configured to communicate with said hub module located within said connectivity device and said switch module located within said connectivity device, said repeater module configured to perform a repeater function including amplifying communication transmissions to extend a distance between the communications devices, said hub module configured to perform a hub function including bringing segments of the wire network together, and said switch module configured to perform a switching function including reducing communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network, and said connectivity device configured to integrate a first function set and a second function set, wherein the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function.

15. (original) A network connectivity device in accordance with Claim 14 further configured to connect at least one communication device to a wire network.

16. (original) A network connectivity device in accordance with Claim 14 further configured to function in a network system comprising at least one of a network hub, a network switch, a network repeater, and a network router.

17. (original) A network connectivity device in accordance with Claim 14 further configured to function in a network system having a topology comprising at least one of a daisy-chain configuration, a ring configuration and a star configuration.

18. (original) A network connectivity device in accordance with Claim 14 further configured to be at least one of a network fault tolerant device and a network fault tolerant management device.

19. (original) A network connectivity device in accordance with Claim 14 further configured to enable SPOC capabilities with a network system.

20. (original) A network connectivity device in accordance with Claim 14 wherein said connectivity device is a network node utilized in a communications network system comprising a plurality of communications devices interconnected by a wire network.

21. (previously presented) A method in accordance with Claim 1 wherein said integrating, within the connectivity device, the first function set and the second function set comprises integrating, within a circuit card, the first function set and the second function set.

22. (currently amended) A method in accordance with Claim 1 wherein the first function set includes ~~at least one of a print function and~~ a programming function.

Remarks

The Office Action mailed January 10, 2005 has been carefully reviewed and the following remarks have been made in consequence thereof.

Claims 1-22 are now pending in this application. Claims 1-22 are rejected. Claims 1, 3, 5, 7, 8, 11-14, and 22 have been amended. No new matter has been added.

The rejection of Claims 1-22 under 35 U.S.C. § 102(b) as being anticipated by Dobbins et al. (U.S. Patent No. 5,790,546) is respectfully traversed.

Dobbins et al. describe a computer network and a secure fast packet switching (SFPS) network including a plurality of network infrastructures that are built up around a core switching fabric (column 3, lines 59-60). The switching fabric provides a plurality of physical paths or routes that allow users to send information to each other (column 3, lines 60-61). A networking chassis (30) is adapted to incorporate the SFPS technology (column 13, lines 34-35). The chassis is a mechanical enclosure (31) which is used to house a plurality of networking modules (32), which may include repeater modules, bridge modules, router modules, and terminal servers (column 13, lines 36-40). A module embodies an SPFS switch (40) which is linked to the module's host processor (41) by a pair of port interface links (42) for transfer of data (column 13, lines 55-59). Examples of bandwidth-limited, shared hardware resources implemented within the computer network include peripheral devices such as printers, scanners, memories, disk drives and backplane communication links.

Claim 1 recites a method for forming a network including a plurality of communication devices, a wire network for allowing a plurality of communication transmissions between the communications devices, and at least one connectivity device connected to the wire network, the method comprising the steps of "utilizing the connectivity device to perform a repeater function including regenerating a communication signal such that the distance between the communications device is extended; utilizing the connectivity device to perform a routing function including routing communication transmissions by the communications devices through the

wire network; and communicating, by a central processing unit located within the connectivity device, with a network hub device located within the connectivity device and a network switch device located within the connectivity device, wherein the network hub device performs a hub function including interconnecting the communication devices by bringing segments of the wire network together, and the network switch device performs a switching function including reducing communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network; and integrating, within the connectivity device, a first function set and a second function set, wherein the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function."

Dobbins et al. do not describe or suggest a method for forming a network as recited in Claim 1. Specifically, Dobbins et al. do not describe or suggest integrating, within the connectivity device, a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Rather, Dobbins et al. describe implementing a printer within a computer network. A description of implementing the printer within the computer network does not teach integrating, within the connectivity device, a first function set and a second function set, where the first function set includes a print function and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Accordingly, Dobbins et al. do not describe or suggest integrating, within the connectivity device, a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. For the reasons set forth above, Claim 1 is submitted to be patentable over Dobbins et al.

Claims 2-6, 21, and 22 depend from independent Claim 1. When the recitations of Claims 2-6, 21, and 22 are considered in combination with the recitations of Claim 1, Applicants submit that Claims 2-6, 21, and 22 likewise are patentable over Dobbins et al.

Claim 7 recites a network system comprising "a plurality of communications devices configured to communicate with each other; a wire network configured to interconnect said communications devices and allow a plurality of communication transmissions between said communication devices; a network connectivity device connected to said wire network, said network connectivity device configured to: perform a repeater function including amplifying communication transmissions such that the distance between said communications device is extended; and perform a routing function including routing communication transmissions through said wire network; and a central processing unit located within said network connectivity device and configured to communicate with a network hub device located within said network connectivity device and a network switch device located within said network connectivity device, wherein said network hub device configured to perform a hub function including interconnecting said communication devices by bringing segments of said wire network together, said network switch device configured to perform a switching function including reducing communication collisions by providing communication transmissions from said communications devices with independent paths through said wire network, and said network connectivity device configured to integrate a first function set and a second function set, wherein the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function."

Dobbins et al. do not describe or suggest a network system as recited in Claim 7. Specifically, Dobbins et al. do not describe or suggest the network connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set

includes at least one of the hub function, the switching function, the routing function, and the repeater function. Rather, Dobbins et al. describe implementing a printer within a computer network. A description of implementing the printer within the computer network does not teach the network connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Accordingly, Dobbins et al. do not describe or suggest the network connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. For the reasons set forth above, Claim 7 is submitted to be patentable over Dobbins et al.

Claims 8-13 depend from independent Claim 7. When the recitations of Claims 8-13 are considered in combination with the recitations of Claim 7, Applicants submit that Claims 8-13 likewise are patentable over Dobbins et al.

Claim 14 recites a network connectivity device comprising a central processing unit connected to a electronic storage device, a hub module, a switch module, a repeater module and a router module, the connectivity device connected to a wire network interconnecting a plurality of communication devices, the connectivity device configured to "utilize said router module to perform a routing function including routing communication transmissions through the wire network, wherein said connectivity device includes a central processing unit configured to communicate with said hub module located within said connectivity device and said switch module located within said connectivity device, said repeater module configured to perform a repeater function including amplifying communication transmissions to extend a distance between the communications devices, said hub module configured to perform a hub function including bringing segments of the wire network together, and said switch module configured to perform a switching function including reducing communication collisions by providing communication transmissions from the

communications devices with independent paths through the wire network, and said connectivity device configured to integrate a first function set and a second function set, wherein the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function."

Dobbins et al. do not describe or suggest a network connectivity device as recited in Claim 14. Specifically, Dobbins et al. do not describe or suggest the connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Rather, Dobbins et al. describe implementing a printer within a computer network. A description of implementing the printer within the computer network does not teach the connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Accordingly, Dobbins et al. do not describe or suggest the connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. For the reasons set forth above, Claim 14 is submitted to be patentable over Dobbins et al.

Claims 15-20 depend from independent Claim 14. When the recitations of Claims 15-20 are considered in combination with the recitations of Claim 14, Applicants submit that dependent Claims 15-20 likewise are patentable over Dobbins et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-20 be withdrawn.

The rejection of Claims 1, 7, 14, 21, and 22 under 35 U.S.C. § 102(b) as being unpatentable over Picazzo, Jr. et al. (U.S. Patent No. 6,006,275) is respectfully traversed.

Picazzo, Jr. et al. describe a plurality of networks and an integrated hub/bridge with redundant network transceivers (column 10, lines 9-11). The integrated hub/bridge is implemented within a Token ring network (column 10, lines 23-27). The bridge accepts all messages addressed to a plurality of devices on a local area network (LAN) (2) implementing an Ethernet protocol, and, using a plurality of physical data link protocols employed by the LAN relays the messages to the LAN (column 15, lines 17-20). The networks serve a purpose of connecting many different computers or terminals to each other, host computers, printers, and file servers so that expensive computing assets, programs, files and other data may be shared among many users (column 1, lines 18-25).

Claim 1 is recited above.

Picazzo, Jr. et al. do not describe or suggest a method for forming a network as recited in Claim 1. Specifically, Picazzo, Jr. et al. do not describe or suggest integrating, within the connectivity device, a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Rather, Picazzo, Jr. et al. describe connecting many different computers or terminals to printers so that expensive computing assets, programs, files and other data may be shared among many users. A description of connecting many different computers or terminals to printers does not teach integrating, within the connectivity device, a first function set and a second function set, where the first function set includes a print function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Accordingly, Picazzo, Jr. et al. do not describe or suggest integrating, within the connectivity device, a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater

function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. For the reasons set forth above, Claim 1 is submitted to be patentable over Picazzo, Jr. et al.

Claims 21 and 22 depend from independent Claim 1. When the recitations of Claims 21 and 22 are considered in combination with the recitations of Claim 1, Applicants submit that Claims 21 and 22 likewise are patentable over Picazzo, Jr. et al.

Claim 7 is recited above.

Picazzo, Jr. et al. do not describe or suggest a network system as recited in Claim 7. Specifically, Picazzo, Jr. et al. do not describe or suggest the network connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Rather, Picazzo, Jr. et al. describe connecting many different computers or terminals to printers so that expensive computing assets, programs, files and other data may be shared among many users. A description of connecting many different computers or terminals to printers does not teach the network connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Accordingly, Picazzo, Jr. et al. do not describe or suggest the network connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. For the reasons set forth above, Claim 7 is submitted to be patentable over Picazzo, Jr. et al.

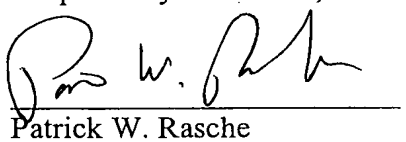
Claim 14 is recited above.

Picazzo, Jr. et al. do not describe or suggest a network connectivity device as recited in Claim 14. Specifically, Picazzo, Jr. et al. do not describe or suggest the connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Rather, Picazzo, Jr. et al. describe connecting many different computers or terminals to printers so that expensive computing assets, programs, files and other data may be shared among many users. A description of connecting many different computers or terminals to printers does not teach the connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. Accordingly, Picazzo, Jr. et al. do not describe or suggest the connectivity device configured to integrate a first function set and a second function set, where the first function set includes a print function other than the hub function, the switching function, the routing function, and the repeater function, and the second function set includes at least one of the hub function, the switching function, the routing function, and the repeater function. For the reasons set forth above, Claim 14 is submitted to be patentable over Picazzo, Jr. et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1, 7, 14, 21, and 22 be withdrawn.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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23465 7590 09/07/2006

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EXAMINER	
PHAM, BRENDA H	
ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 09/07/2006

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,677	05/18/2001	Eric Clifton Matteson	30-GF-1099	3677

TITLE OF INVENTION: ETHERNET NODE HAVING HUB, SWITCH AND/OR REPEATER CHARACTERISTICS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$0	$1700	12/07/2006

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

Entered into PAGE/PIES
Date: 9/12/06
By: LJ / HP

SCANNED
9/12/06 JR

ENTERED
Date: 9/11/06
By: mce

14983-32

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

23465 7590 09/07/2006

JOHN S. BEULICK
C/O ARMSTRONG TEASDALE, LLP
ONE METROPOLITAN SQUARE
SUITE 2600
ST LOUIS, MO 63102-2740

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,677	05/18/2001	Eric Clifton Matteson	30-GF-1099	3677

TITLE OF INVENTION: ETHERNET NODE HAVING HUB, SWITCH AND/OR REPEATER CHARACTERISTICS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$0	$1700	12/07/2006

EXAMINER	ART UNIT	CLASS-SUBCLASS
PHAM, BRENDA H	2616	370-401000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,677	05/18/2001	Eric Clifton Matteson	30-GF-1099	3677

23465 7590 09/07/2006

JOHN S. BEULICK
C/O ARMSTRONG TEASDALE, LLP
ONE METROPOLITAN SQUARE
SUITE 2600
ST LOUIS, MO 63102-2740

EXAMINER	
PHAM, BRENDA H	
ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 09/07/2006

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 737 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 737 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

COPY

Notice of Allowability	Application No. 09/681,677	Applicant(s) MATTESON ET AL.	
	Examiner Brenda Pham	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *04/10/06*.

2. ☒ The allowed claim(s) is/are *1-22*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

BRENDA PHAM
PRIMARY EXAMINER
Brenda A. Pham 8/28/06